

Chapter Three

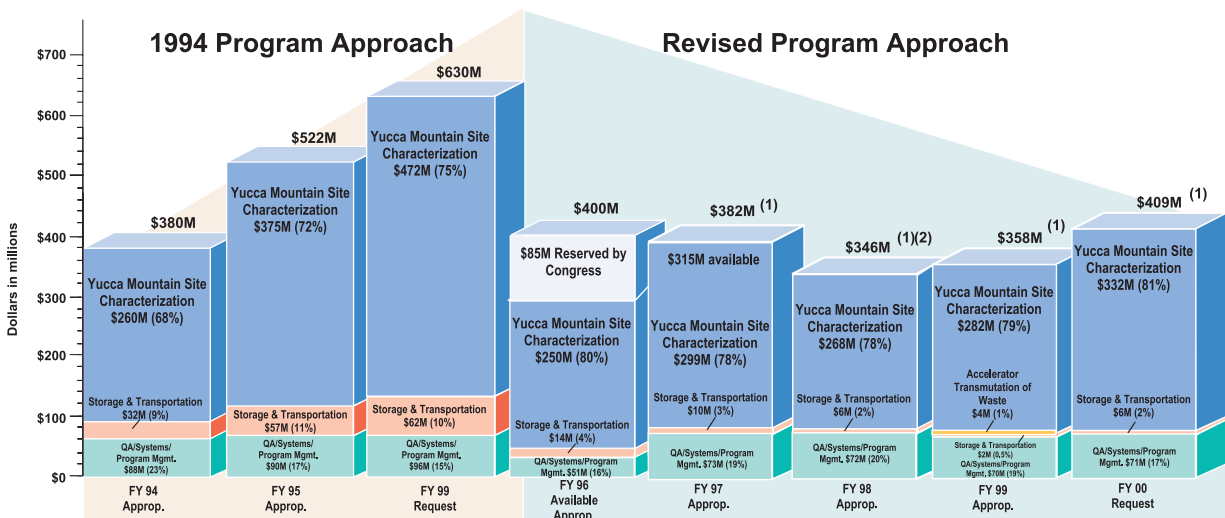
Program Management and Administration

Introduction

While our Fiscal Year 1998 appropriation was less than the prior year's, we continued to pursue the basic course of action set forth in our 1996 draft *Revised Program Plan*. Revision 2 of the plan, issued in July 1998, essentially affirmed that our course is sound. With the viability assessment nearing completion and transportation planning and planning for acquisition of waste acceptance and transportation services deferred, we restructured our organization to focus on the work ahead: preparation of an environmental impact statement and the other information needed to support a

Secretarial decision in 2001 on whether to recommend the Yucca Mountain site to the President for development as a repository, and, if the site is recommended and approved, submittal in 2002 of a license application to the NRC.

Although much of the information that will support the Secretarial decision would also serve as the foundation for a license application, the application requires more comprehensive information, particularly about design. It also requires many years of lead time. We had begun to prepare for licensing years ago, and our Fiscal Year 1998 reorganization was designed in part to accelerate



- (1) Support service contracts in QA/Program Management sector in FY 97, FY 98, and FY 99.
- (2) The FY 1998 Appropriations Act for Energy and Water Development initially provided \$350 million for OCRWM.

OCRWM budget appropriations

this effort along the lines detailed in Volume 4 of the viability assessment, “License Application Plan and Costs.”

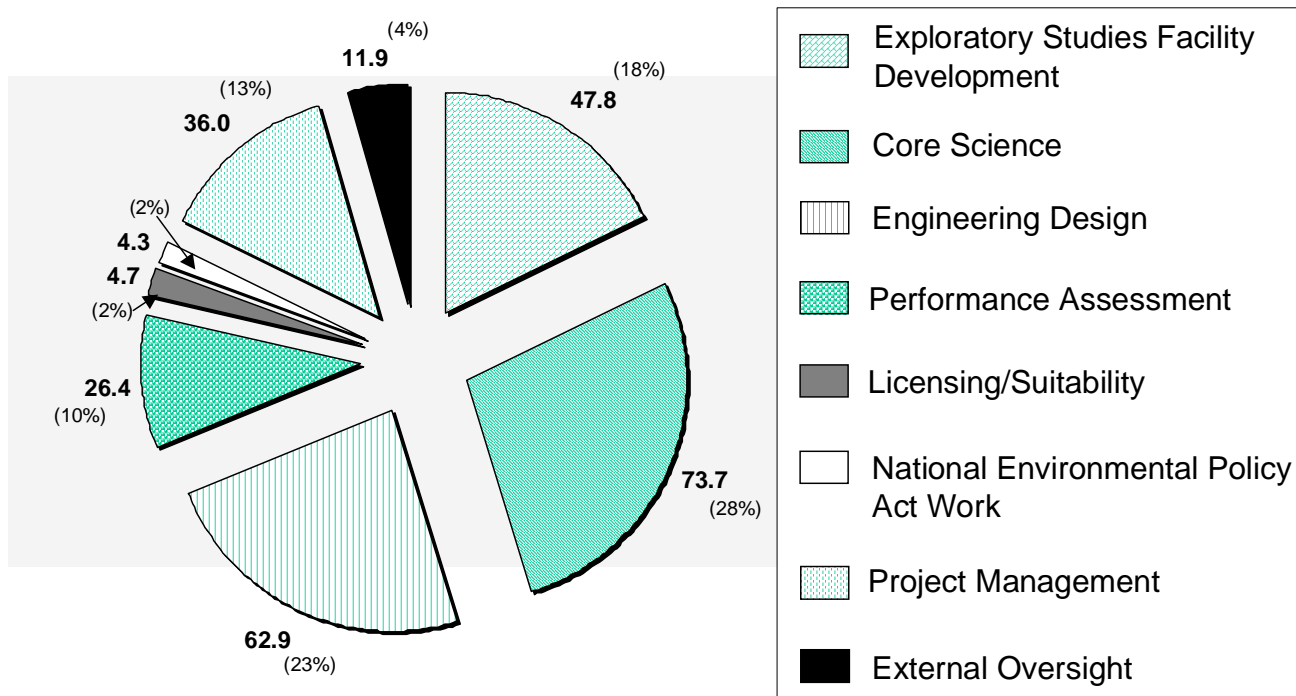
Shifting more personnel and functions from Washington, D.C., to the Yucca Mountain Site Characterization Project while reorganizing both that Project and headquarters posed a challenge, but careful planning and mature management and administration systems enabled us to make these changes smoothly.

Budget

Our Fiscal Year 1998 appropriation of \$346 million was \$34 million less than the Administration’s request, and \$36 million less than the Fiscal Year 1997 appropriation.

In the conference report accompanying the Fiscal Year 1997 Energy and Water Development Appropriations Act, Congress had directed OCRWM to “refocus the repository program on completing the core scientific activities at Yucca Mountain” and to prepare a viability assessment. Continuing under this direction, we again allocated 85 percent of our appropriation to the Yucca Mountain Site Characterization Project. The remaining funds were used to support the Acceptance, Transportation, and Integration Project, which received 2 percent, and the Program Management Center, which received 13 percent.

The \$296 million budget allocated to the Yucca Mountain Site Characterization Project was distributed as shown in the figure below.



Yucca Mountain Site Characterization Project Fiscal Year 1998 budget (in millions of dollars)

The challenge of meeting program objectives with reduced funding required constant management attention. One change we made involved resequencing tasks: we advanced the construction schedule for the cross-drift at the Yucca Mountain site by 1 year, to a completion date of October 1998. This enabled scientists to examine the geologic unit that crosses the repository horizon and include preliminary findings in the viability assessment. It also avoided the costs of having the construction contractor that had excavated the Exploratory Studies Facility demobilize, and then remobilize for construction of the cross-drift.

Program Planning

OCRWM's *Program Plan, Revision 2*, published in July 1998, essentially continued the thrust of the 1996 draft revised plan. Reflecting guidance from the Administration, Congress, and the Department, it identifies strategic objectives for Fiscal Years 1998-2003, states the assumptions that the plan rests on, defines measures of success, and provides for contingency planning. It is intended to serve not only as the foundation of program management, but as a common framework that all parties can use to evaluate our progress and shape their own participation in the Program.

The plan embodies the approach to planning that the Government Performance and Results Act (GPRA) requires at the departmental level. That Act took effect with the Fiscal Year 1999 budget cycle. It requires that each agency (1) prepare a strategic plan at least every 3 years covering a period of not less than 5 years forward from the fiscal year in which it is submitted; (2) prepare, for submission with its annual budget request, an annual performance plan that establishes performance goals and indicators; and (3) report to the President and the Congress each year on program performance for the previous year.

Although GPRA's requirements for a strategic plan and an annual performance plan and performance report apply at the departmental level, we adopted key GPRA provisions for our own program planning. Our *Program Plan, Revision 2*, is directly linked and traceable to objectives, strategies, and success measures in the Department's Strategic Plan. Some of the GPRA-compliant commitments and performance measures we developed for Fiscal Year 1998 were included in the Secretary of Energy's Performance Agreement with the President. All of those commitments (reproduced on the inside front cover of this report) were met.

During 1998, we tracked and reported our progress in meeting the OCRWM success measures in the Secretary's Fiscal Year 1998 Performance Agreement with the President. We developed OCRWM performance measures for inclusion in the Secretary's Fiscal Year 1999 Performance Agreement with the President. We also developed preliminary OCRWM performance measures for Fiscal Year 2000 as elements of a 5-Year Planning Summary covering Fiscal Years 2000 through 2004. The Secretary's performance agreements with the President also serve to satisfy the GPRA requirement for the Department's annual performance plan.

The *Strategic System Management Policy* document, issued in Fiscal Year 1998, is the tool by which the Program is implemented. It describes the management system processes necessary to manage the Program, consolidates and codifies management systems requirements, and implements DOE directives. Its performance-based, graded approach promotes accountability across Federal and contractor organizations. It also governs the management of physical assets. An OCRWM Advisory Group has been formed to oversee implementation of the policy and to manage any revisions to the document.

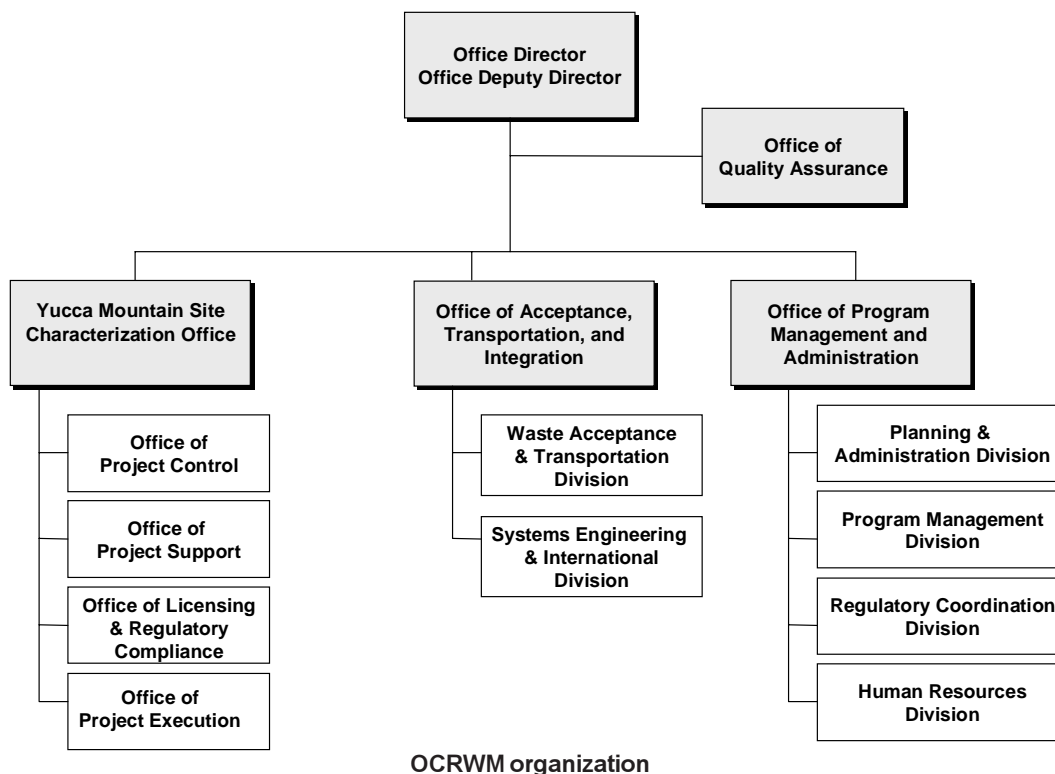
Restructuring the Organization

With the viability assessment nearing completion, we restructured our organization to focus our resources on the work ahead. Reorganization of headquarters took effect July 19, 1998; reorganization of the Yucca Mountain Site Characterization Office was effective October 1, 1998. A number of factors led to the reorganization: (1) transportation planning was placed on hold until it becomes a near-term requirement, around the time of license application, in 2002; (2) increasingly, the locus of most work was Las Vegas; (3) work associated with the viability assessment was drawing to a close; (4) meeting DOE's Strategic Alignment Initiative staffing target for OCRWM required a reduction in force.

Because the Yucca Mountain Site Characterization Project expends the bulk of program funds and does most of the technical

work, we transferred a majority of contract management activities from headquarters to the Project. At headquarters, we eliminated two Divisions and realigned another to link program integration functions more closely to planning for waste acceptance. Within the Office of Quality Assurance, which reports directly to OCRWM's Director, a Program Assessment Team was established.

At the Yucca Mountain Site Characterization Office, we organized work around three offices. The Office of Licensing and Regulatory Compliance defines project regulatory and licensing requirements and conducts project-level strategic planning. The Office of Project Execution manages development of primary work products leading to a license application and ensures that they meet requirements. The Office of Project Support manages OCRWM's management and operating contractor and support



contracts; information technology, including records management; property management; safeguards and security planning; training; and human resources.

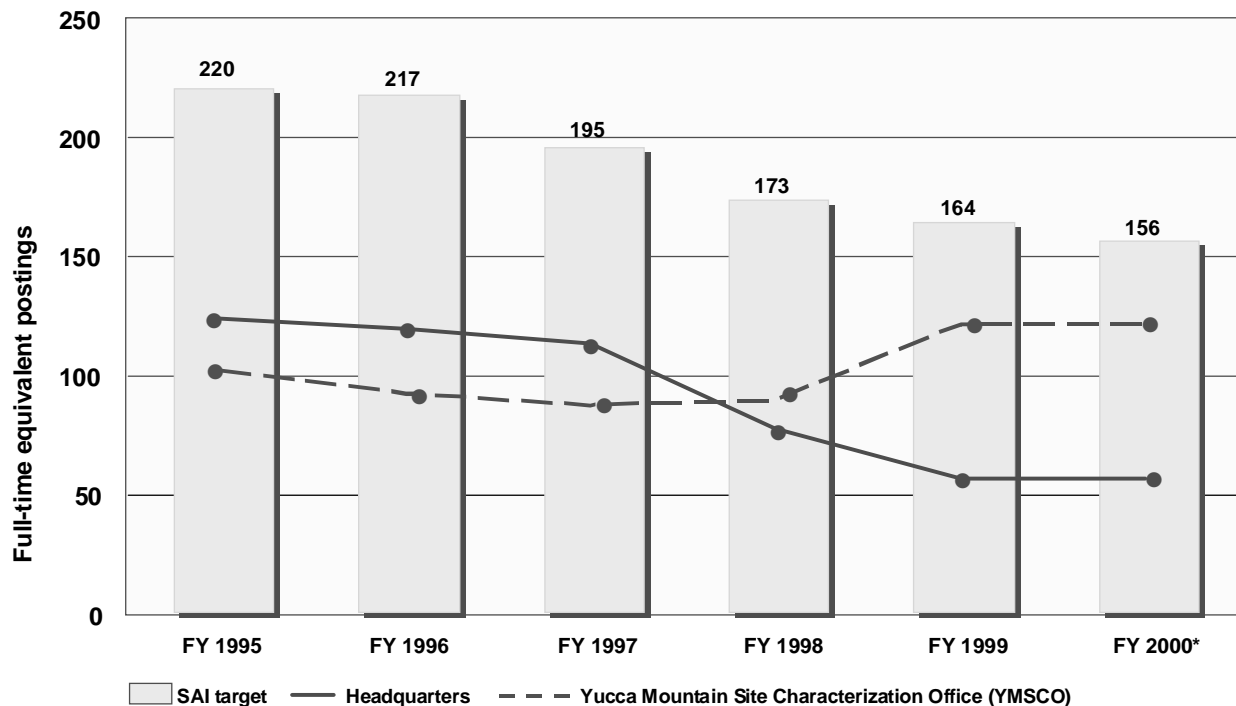
With heightened attention to licensing came even greater attention to ensuring the defensibility and traceability of our work. Careful documentation of decisions and rigorous adherence to the quality assurance standards will help us ensure the integrity of the information on which future decisions will rest.

Staffing reductions and contractor oversight

We began the year with 202 full-time positions; by year's end, our on-board strength had fallen below the Secretary's Strategic Alignment Initiative

target of 173, to 168 Federal employees. Of those 168 employees, 99 were at the Yucca Mountain Site Characterization Office; 69 were at headquarters. Reaching this staffing level required a reduction-in-force early in Calendar Year 1998.

We transferred from headquarters to the Yucca Mountain Site Characterization Office the responsibility for oversight of our management and operating contractor. Because the bulk of the contractor's work supports that office, this transfer moved the oversight function closer to the contractor's day-to-day operations. In Fiscal Year 1998, contractor staffing levels rose slightly because of the demands of preparing the viability assessment and the draft environmental impact statement.



*Projected reflects Office of Quality Assurance, full-time equivalent positions at YMSCO in addition to transfer of contract management functions to YMSCO (FY 1999 – FY 2000).

OCRWM Strategic Alignment Initiative (SAI) targets and actual staffing levels

We also continued implementing DOE-wide contract-reform measures. With our management and operating contractor, we developed a performance evaluation management plan that defines critical performance objectives, measures, and expectations against which performance will be measured and fees determined. The plan's objectives are directly linked to the Department's strategic plan and OCRWM's *Program Plan*; its intent is to establish a clear set of incentives that promote cost-effective, quality performance. We submitted the plan to the Department's Office of Business Clearance, and it was approved in October 1998. It is being implemented in Fiscal Year 1999. The management and operating contract has been converted to a performance-based contract that includes payment of award fees and performance fees based on subjective and objective evaluations.

Program Control and Coordination

Control of baseline changes

OCRWM uses common business practices and standard project management tools to plan and execute its work and to monitor and measure program performance against the baseline. Because baselines are the principal program management tool, baseline documents and changes to them are closely controlled. As the Program evolves and responds to fluctuating funding levels and/or new direction, baselines are modified by means of controlled changes that are evaluated and then approved or disapproved by baseline change control boards at each appropriate level in the hierarchy.

The baseline management process outlined in the Strategic System Management Policy ensures that baselines are clearly defined and controlled at the appropriate level of authority: Secretarial, Program, Project, and contractor. It also ensures that contractors' work deliverables satisfy the

technical and operational requirements derived from mission and programmatic needs.

In Fiscal Year 1998, the program baseline was changed to incorporate both mixed oxide (MOX) spent nuclear fuel as part of the commercial spent nuclear fuel inventory and immobilized plutonium waste forms. The Civilian Radioactive Waste Management System Requirements Document was revised to reflect these changes and issued as Revision 5 in January 1999. Acceptance criteria for immobilized plutonium and DOE-owned and naval spent nuclear fuel are being incorporated into the Waste Acceptance System Requirements Document; acceptance criteria for high-level radioactive waste had previously been incorporated.

Regulatory coordination

OCRWM is subject to external regulation and oversight and internal DOE requirements. Coordination helps ensure that regulatory issues affecting our Program are handled appropriately. In Fiscal Year 1998, we provided technical assistance to EPA regarding its development of radiological protection standards, and to the NRC concerning its revisions to its licensing regulations. Other licensing-related activities included participating in resolution of regulatory issues related to quality assurance, decision documentation, and commitment tracking.

Another major task was developing the process by which we will formulate and present the information required to support the Secretarial decision on site recommendation. We also provided strategic and policy input to the development of DOE positions on external regulation of other DOE nuclear facilities. We continued to coordinate policy on National Environmental Policy Act compliance and environmental justice matters, providing input to the environmental impact statement on

management of spent nuclear fuel at the Savannah River Site and to the revision of a DOE order related to protection of groundwater.

Interactions with the NRC are discussed in Chapters 1 and 2; those with the Nuclear Waste Technical Review Board, in Chapter 1.

Safeguards and Security

To obtain authorizations from the NRC to construct, operate and monitor, and close a repository, we will have to demonstrate that our program complies with NRC requirements for a nuclear safeguards and security program. While utilities already have such programs in place as a condition of the NRC licenses they hold, OCRWM must develop a program that will ensure that when DOE-managed nuclear materials are accepted by the waste management system, they are safely and securely managed.

In July 1998, the NRC published NUREG-1619, "Standard Review Plan for Physical Protection Plans for the Independent Storage of Spent Fuel and High-Level Radioactive Waste." On November 12, 1998, the NRC issued a final rule, 10 CFR 73.51, "Requirements for the Physical Protection of Stored Spent Nuclear Fuel and High-Level Radioactive Waste." This rule defines the requirements for physical protection of spent nuclear fuel and high-level radioactive waste in the operations area of a geologic repository, requiring protection against the loss of control that could cause radiation exposure exceeding the dose established in 10 CFR 72.106.

In Fiscal Year 1998, OCRWM drafted a schedule for developing four preliminary plans to be incorporated into a license application to the NRC:

- A Physical Protection Plan will define a physical protection system that will provide a high level of assurance that activities involving spent nuclear fuel and high-level radioactive

waste are conducted in a manner that will not pose an unreasonable risk to public health and safety.

- A Material Control and Accounting Plan will demonstrate that OCRWM has in place a system for documenting continuity of knowledge about the material accepted for disposal.
- A Safeguards Contingency Plan will identify the goals and objectives for responding to threats, thefts of property, or radiological sabotage.
- A Security Organization Personnel Training and Qualification Plan will describe the training, selection, equipping, testing, and qualifications of individuals responsible for protecting the operations area at the repository.

In Fiscal Year 1999, we will develop Safeguards and Security Policy Guidelines to support a single license application to the NRC that would cover all waste forms. The application will be based on the acceptance and disposal of waste forms for which nonproliferation is not an issue; that is, the waste forms would be no more attractive for diversion than spent nuclear fuel or vitrified high-level radioactive waste. The Policy Guidelines will establish the functional characteristics by which all wastes entering the system will be evaluated. Bounding values will be defined for applicable characteristics to ensure that all waste accepted at the repository falls within safeguards and security licensing conditions. These guidelines will ultimately serve as the basis for safeguards and security waste acceptance criteria in OCRWM's Waste Acceptance Systems Requirements Document.

Information Management

Application of information technology

While OCRWM is headquartered in Washington, DC, most of our Federal and contractor personnel work at the Yucca Mountain Site Characterization Project in Las Vegas and at the Yucca Mountain site in Nye County, Nevada. Project participants also include scientists at DOE's National Laboratories, which are located around the country, and other personnel who support the Project from remote locations.

Reliable, continuous communication among the several thousand individuals engaged in technical, scientific, engineering, regulatory, policy, environmental, administrative, and other functions at multiple locations is essential to our work. Moreover, OCRWM, and in particular the Yucca Mountain Site Characterization Project, manages a vast amount of information, a major portion of which may eventually be needed in a formal licensing proceeding. Ensuring the integrity of this information base, making it readily accessible to large numbers of users at multiple sites, and maintaining reliable communications is a high priority. Consequently, we have devoted significant effort in recent years to developing and maintaining an effective information management (IM) system that employs state-of-the-art technologies to meet these needs.

An important feature of that system is integration. IM plans, systems, and activities are coordinated across the Program through OCRWM's IM Council and its two standing working groups—the IM Architecture Working Group and the Records Working Group. An IM Steering Committee ensures that IM planning is integrated with overall Program planning; OCRWM's IM Strategic Plan and IM Multiyear Program Plan help ensure consistency between IM and the Program at large and among IM sites, and they help us avoid costly and unnecessary duplication of effort.

During Fiscal Year 1998, we used information technology to post the component documents of the viability assessment on the Project's Intranet as each was being developed, so that contributors could observe and shape its evolution. Many of the Program's policy and technical documents are posted on the OCRWM Web site, including the viability assessment and companion and supporting documents.

Y2K compliance efforts

Since Fiscal Year 1997, we have been working to upgrade systems and networks with Y2K-compliant hardware and software. We declared four systems mission-critical; several others were designated mission-important. During Fiscal Year 1998, we began to assess and test all software applications. OCRWM's Acting Director personally monitored progress through weekly reports and periodic videoconferences with the Yucca Mountain Site Characterization Project. We validated for Y2K compliance and implemented all mission-critical systems ahead of the Department's stretch goal of January 31, 1999. Assessment of non-mission-critical systems is in progress, and we expect to validate and implement all non-mission-critical systems later in Fiscal Year 1999.

Other IM activities

During Fiscal Year 1998, we put in place an Internet firewall and implemented the associated network security. Within the Exploratory Studies Facility at the Yucca Mountain site, we installed fiber-optic telecommunications lines down-tunnel to ensure real-time access and efficient transport of geological data to scientific and technical staff working on the drift-scale heater test described in Chapter One. Heavy reliance on videoconferencing continued to help us avoid larger travel costs between Las Vegas, Nevada, and Washington, DC.

We also continued to prepare our records for a possible licensing proceeding. On December 30, 1998, the NRC finalized its revision of 10 CFR 2, Subpart J, which establishes the requirements for an Internet-based Licensing Support Network (LSN). Although the final rule revises the requirement for a large centralized database, the requirement to provide scanned images with associated bibliographic indexes and searchable full text of each document related to licensing remains unchanged. Along with providing an electronic means of supporting document discovery motions, the LSN will provide for the electronic docketing of the license application itself. We have continued to reprocess legacy records and process current records into the required format to support the LSN. As of the end of April 1999, approximately 386,000 legacy records had been reprocessed; approximately 248,000 remain. Our system holds a total of 860,000 legacy and current records combined.

Under the Department's cooperative agreement with the University and Community College System of Nevada, researchers will explore and enhance record-indexing techniques in order to improve methods of tracking and retrieving data in our records management system and supporting the NRC's licensing support network.

External Interactions and Outreach

Building understanding

The figure on page 17 presents the statutory milestones that mark the path to an operating repository. Each of those milestones presents opportunities for public participation. To participate meaningfully and constructively, program stakeholders want and need information about our work. In turn, we want and need the benefit of their views as we formulate our plans and assess our performance. Although our external interactions have been curtailed in recent years

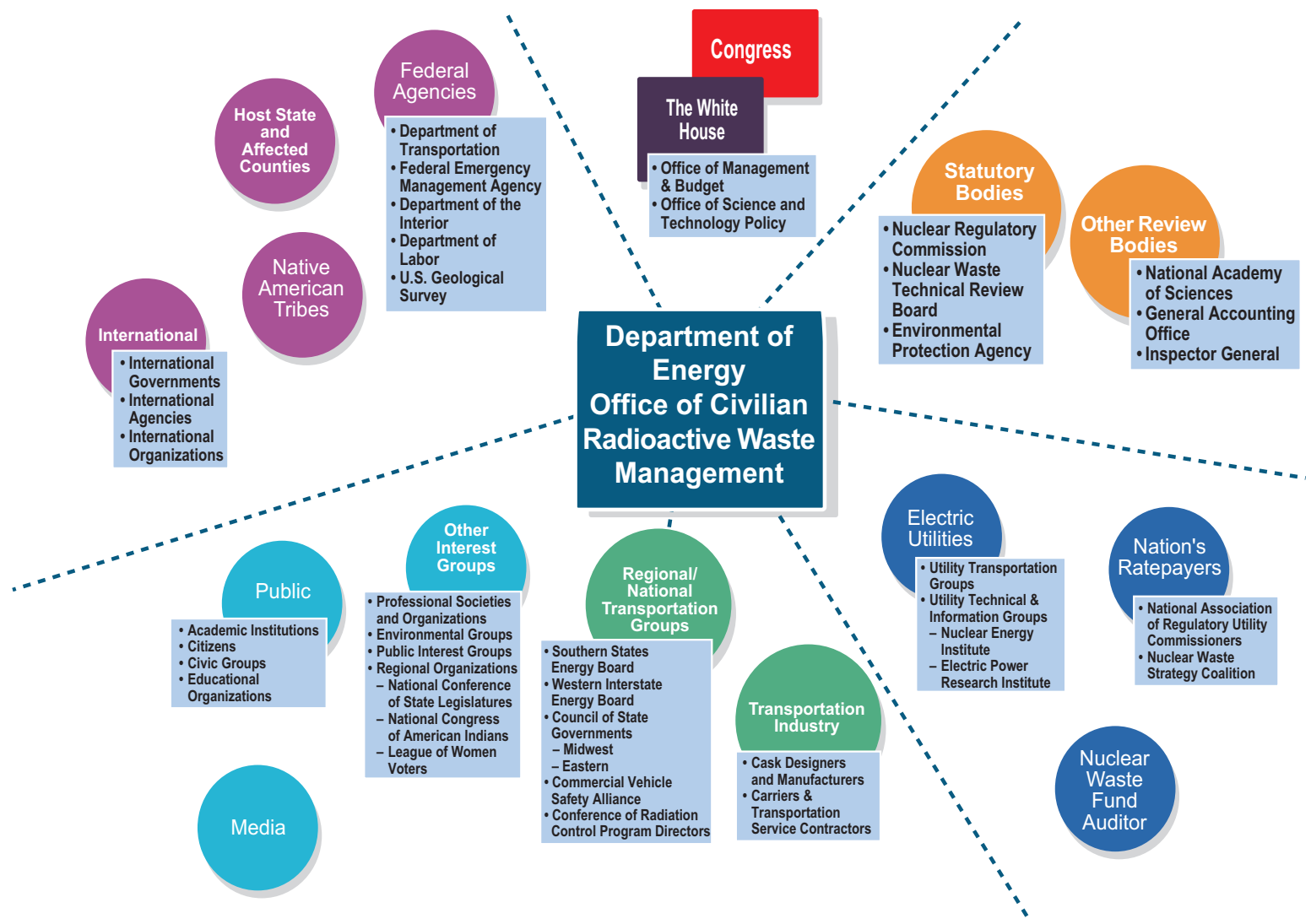
because of funding cuts, in Fiscal Year 1998 we continued to provide information to other parties and actively solicit their views.

Throughout the year, OCRWM's Acting Director and staff at headquarters and at the Yucca Mountain Site Characterization Project met with representatives of other Federal agencies, environmental groups, technical and professional organizations, policy groups, and international organizations. These groups included the Nevada Legislative Committee on High Level Radioactive Waste, Nevada Commission on Nuclear Projects, National Governors' Association, Western Governors' Association, National Research Council, Nuclear Materials Stewardship Conference, Institute of Nuclear Materials Management, Savannah River Citizen's Advisory Board, National Association of Regulatory Utility Commissioners, American Nuclear Society, University of Arizona Waste Management 1998 Conference, Nuclear Energy Institute, the DOE Facility Contractors Group, NAC International, the Sierra Club, Public Citizen, Alliance for Nuclear Accountability, U.S. Public Interest Research Group, the Nuclear Information and Resource Service, and the Nonproliferation Roundtable hosted by the Carnegie Endowment for International Peace, Washington, DC.

Interactions with external parties, including those from other countries, are also discussed in Chapters 1 and 2. The figure below identifies the many parties we interact with both formally and informally.

Cooperative agreements

Cooperative agreements facilitate the involvement of national, regional, and State organizations in our Program. The agreements typically run for 5 years, with funding provided annually, subject to availability. In recent years, funding has declined sharply, and further cuts appear likely.



External parties with whom OCRWM interacts

In Fiscal Year 1998, we continued our interactions with the nine groups with which cooperative agreements remained in force: the Commercial Vehicle Safety Alliance; the Conference of Radiation Control Program Directors, Inc.; the Council of State Governments' Eastern Regional Conference and Midwestern Office; the National Association of Regulatory Utility Commissioners; the National Conference of State Legislatures; the National Congress of American Indians; the Southern States Energy Board; and the Western Interstate Energy Board.

Cooperative agreements with Nye County and the University and Community College System of Nevada are described in Chapter One.

OCRWM National Information Center

Our National Information Center provided the public with general programwide information and responded to specific questions and requests received through a toll-free telephone number, through the mail, and over the Internet. The Center relied heavily on the OCRWM Web site as the most efficient and cost-effective means of making program documents, announcements, and other materials available to the general public. During Fiscal Year 1998, the OCRWM Web site was redesigned to make it more user-friendly and visually more appealing. It presents a comprehensive range of program information and services, including current program and budget plans, major program documents, congressional testimony, *Federal Register* notices, speeches, fact sheets, news releases, photographs of the Yucca Mountain site, a calendar of scheduled events and meetings, notification of opportunities for public participation, a publications ordering system, and now the complete viability assessment of the Yucca Mountain site.

The OCRWM Web site also offers a Technical Publications Database that enables users to review abstracts of recent OCRWM technical

reports that have been issued and submitted to the Department's Office of Scientific and Technical Information Energy Database. An interactive mailbox facilitates responses to individual questions and elicits comments on the Web site. As a convenience to users, the site is linked to the Web sites of other agencies and organizations with which OCRWM regularly interacts, including the NRC, EPA, and the State of Nevada. An upward trend in visits has continued. Users come from more than 30 countries on 6 continents and represent a variety of government, commercial, academic and private domains.

The OCRWM Enterprise, a semiannual newsletter, is posted on the OCRWM Web site. It is also printed and distributed through the mail, to meet the needs of interested parties without access to the Internet. The OCRWM Calendar announces opportunities for public involvement, programwide meetings, and Yucca Mountain tours open to the public. The Calendar also identifies meetings that are videoconferenced for the convenience of stakeholders who cannot or prefer not to travel to the meeting site. The Calendar is posted on the OCRWM Web site and published in *The OCRWM Enterprise*.

The four-volume OCRWM education resource curriculum, "Science, Society, and America's Nuclear Waste," was posted on OCRWM's Web site to support the Department's commitment to advancing the Nation's science education and literacy. This resource curriculum is an educational tool for grades 8-12 that encourages hands-on, real-world experience.

Scholarship and fellowship programs

OCRWM's scholarship and fellowship programs implement Executive Order 12677, which directs support to Historically Black Colleges and Universities, and the Secretary of Energy's Science and Math Education Initiative. The programs also provide a potential pool of skilled

scientists and engineers to help meet OCRWM's future staffing needs.

OCRWM supported scholarships for ten juniors and seniors attending the Nation's Historically Black Colleges and Universities in Fiscal Year 1998. The scholars were competitively selected, primarily on the basis of academic achievement and their interest in pursuing careers in fields related to high-level radioactive waste management. Scholars serve summer internships at the Yucca Mountain Site Characterization Project or with other program participants. The internships offer them an opportunity to learn how the skills and knowledge gained through their undergraduate scientific and technical studies can contribute to our work.

Through its Radioactive Waste Management Graduate Fellowship Program, OCRWM provided fellowships to eight graduate students pursuing advanced degrees in disciplines directly related to high-level radioactive waste management at the Nation's top colleges and universities. Fellows are selected from among numerous applicants, primarily on the basis of academic standing and career goals, and they must attend a college or university with an approved program in high-level radioactive waste management. Fellows complete a practicum assignment that involves research relevant to ongoing site characterization studies, at the Yucca Mountain Site Characterization Project or with other program participants.